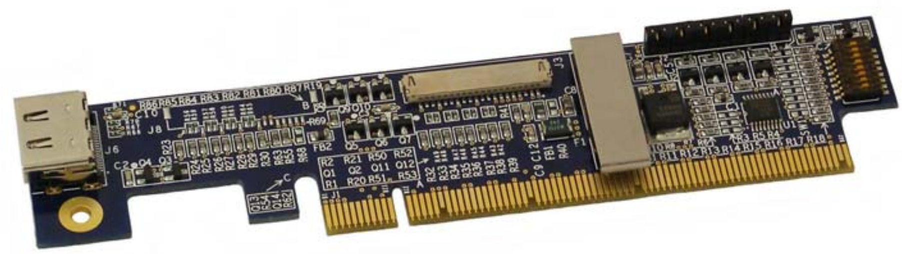
User Manual

for the

820957 KT-PCIe-DVI-HDMI
820959 KT-PCIe-DVI

Designed primarily for KT690 and KT780 motherboards



820957 KT-PCIe-DVI-HDMI



820959 KT-PCIe-DVI

	KT-PCIe-DVI-HDMI	KT-PCIe-DVI
Part no.	820957	820959
PCB no.	30103330	30103330
Ass. no.	69100000	69100100
Notes	KT690 only HDMI	Only for KT690

Document revision history.

Revision	Date	By	Comment
A	Mar. 19th 2009	MLA	Document name corrected
0	Dec. 11th 2008	MLA	Preliminary version.

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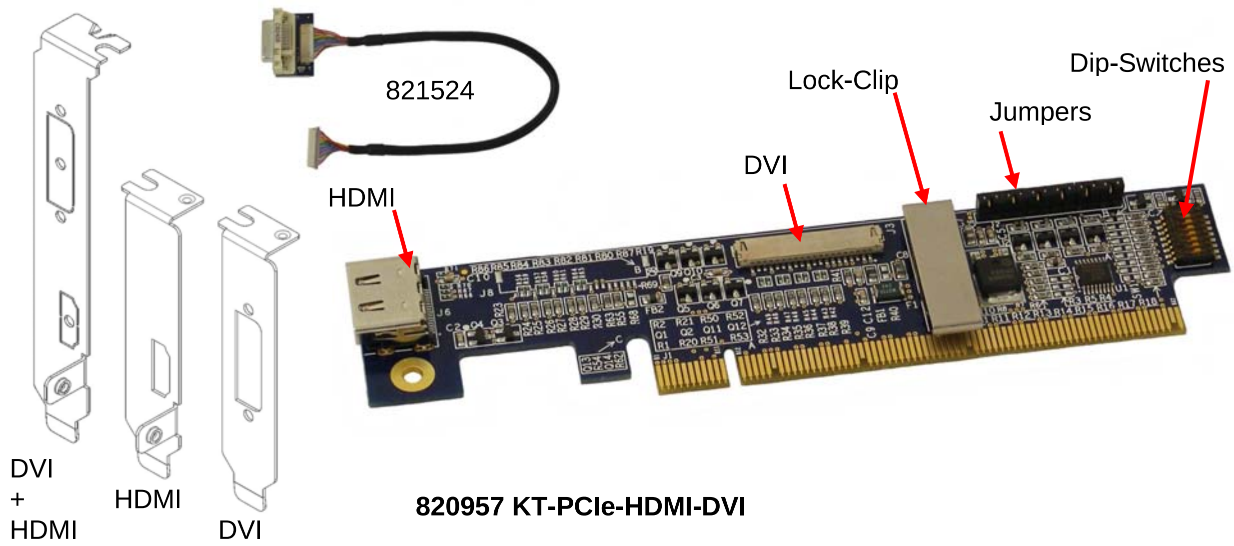
As used herein:
1. Life support devices or systems are devices or systems which, (a) are intended for surgical implant into body, or (b) support or sustain life and whose failure to perform, when properly used in accordance with instructions for use provided in the labelling, can be reasonably expected to result in significant injury to the user.
2. A critical component is any component of a life support device or system whose failure to perform can be reasonably expected to cause the failure of the life support device or system, or to affect its safety or effectiveness.

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Introduction

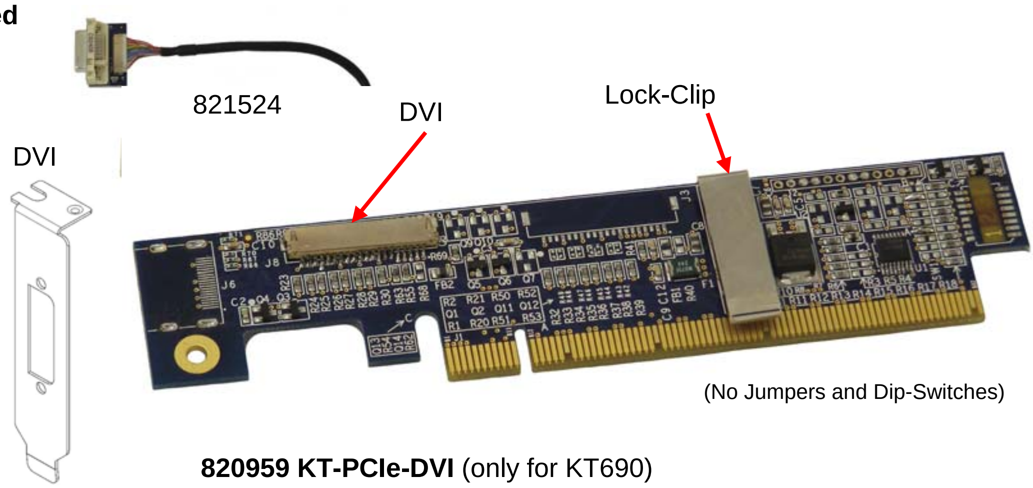
When the KT-PCIe-DVI-HDMI card is plugged into the PCI-Expressx16 connector then the motherboard automatically detects the card and select SDVO output. The card operates at pixel rates of up to 165MHz per link, supporting 1920x1200 panels at a 60Hz refresh rate.

- Low profile DVI/HDMI module (< 35mm above MB PCB)
- High-speed TMDS.
- Panel resolution up to 1920x1200 or similar.
- Support independent DVI and HDMI dual display.
- Including Lock-Clip to fix the module to the PCIe socket.
- No tools required for mounting/dismounting the module.
- HDMI and DVI Interface, both manage up to 165Mpixels/s
- HDMI connector mounted on the IO panel side.
- DVI connector via SIL-20p and cable kit 821524.
- DVI 1.0 and HDMI compliant.
- Complete Windows and DOS support.
- Included Low Profile Brackets for HDMI KT780
- Included Full Height ATX Bracket for HDMI KT780, with “break-off-plate” for HDMI and for DMI.
- Included Low Profile Bracket for DVI (fit the 821524 kit)



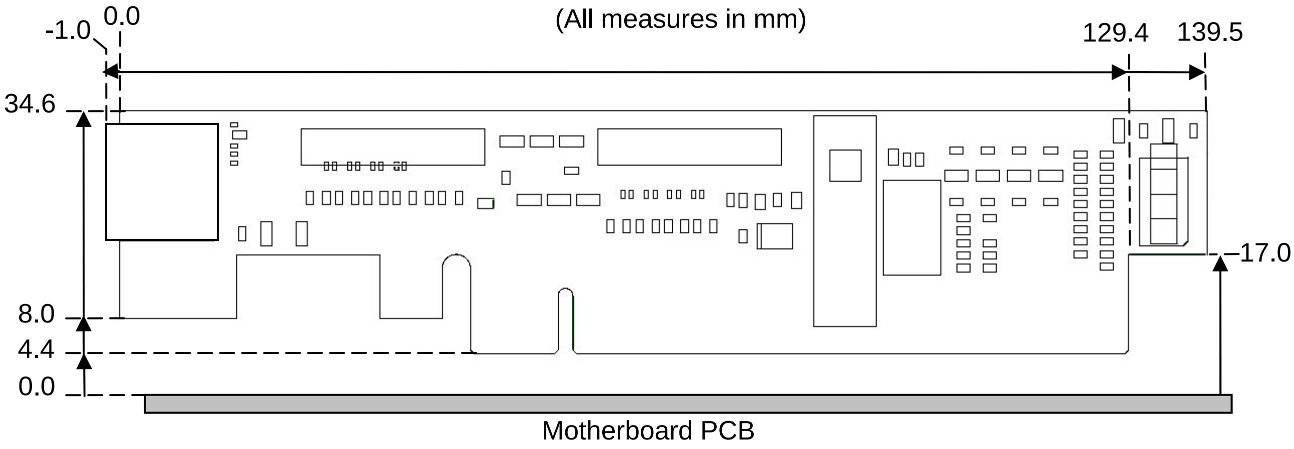
820957 KT-PCIe-HDMI-DVI

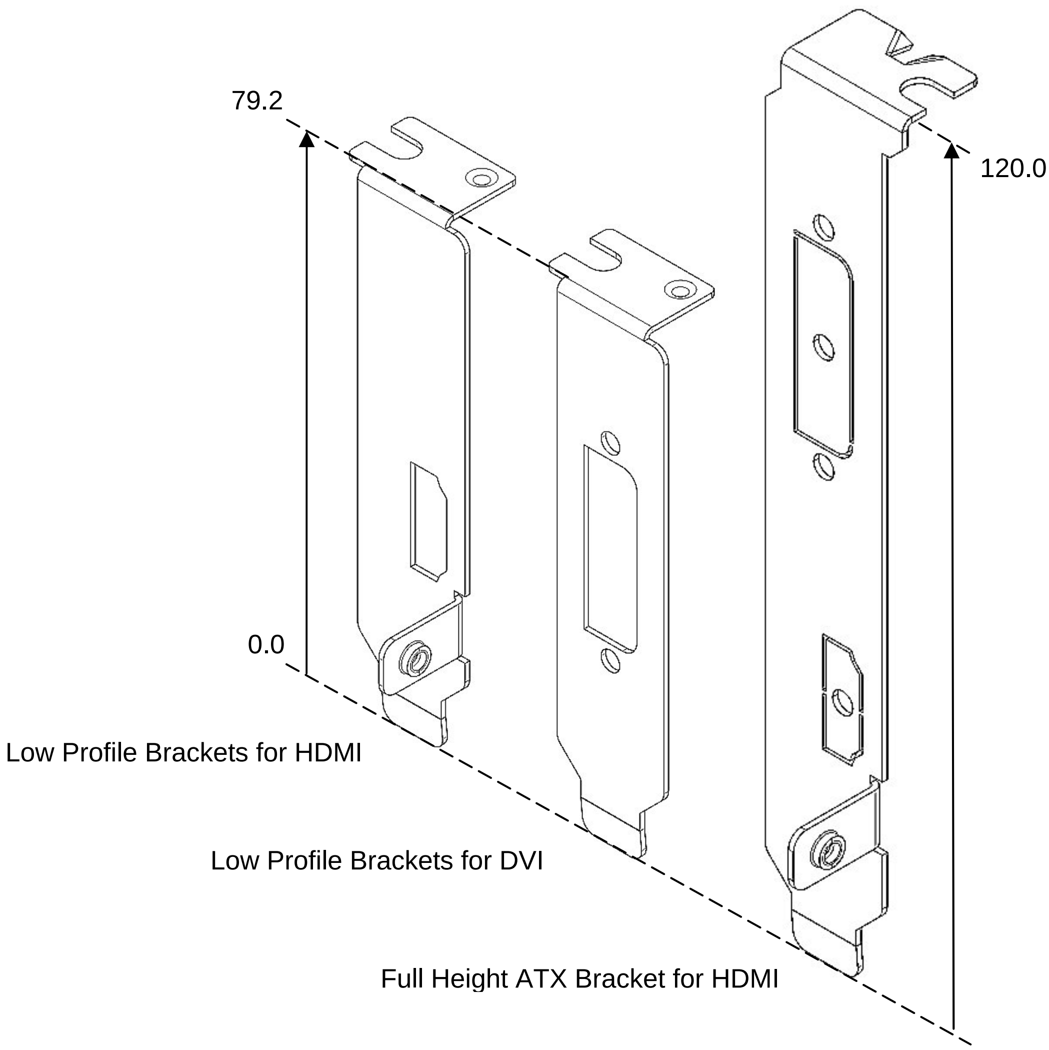
Brackets included



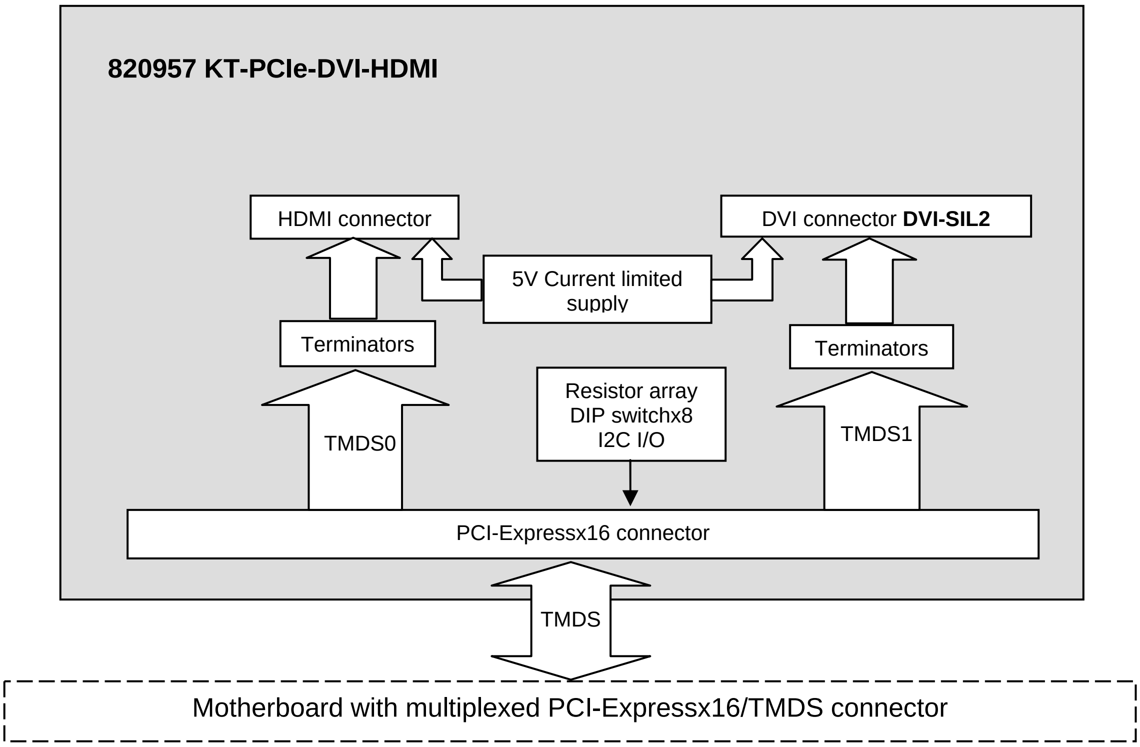
820959 KT-PCIe-DVI (only for KT690)

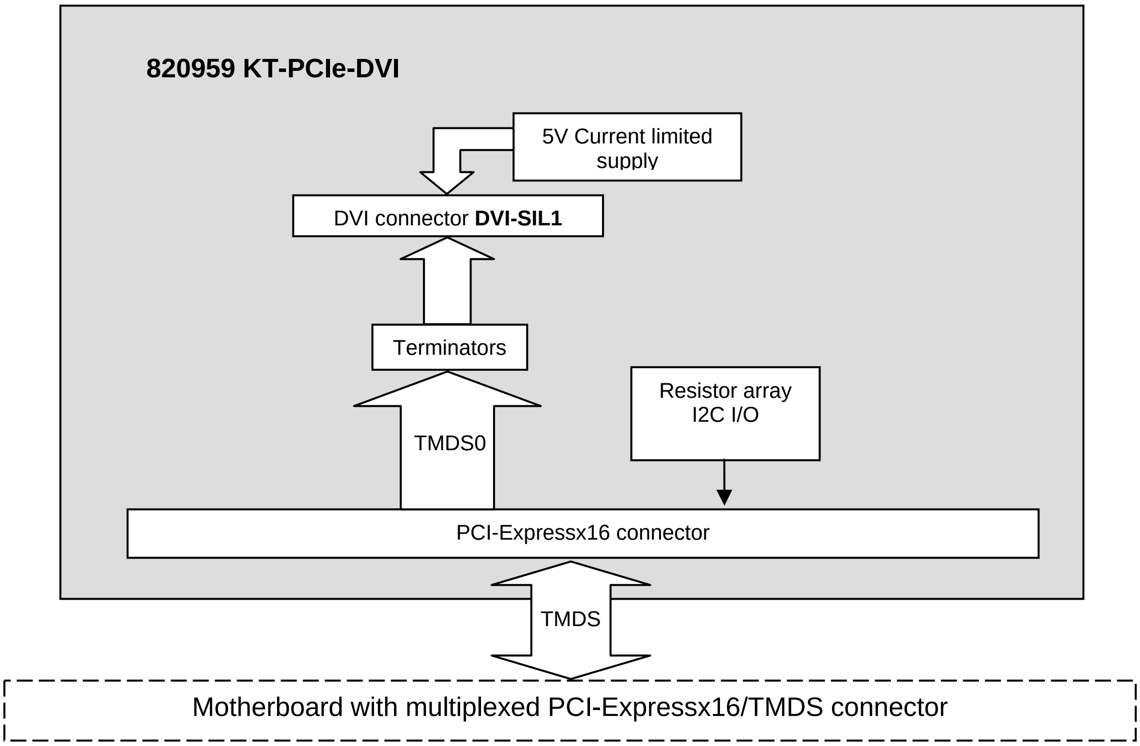
Mechanical Drawings





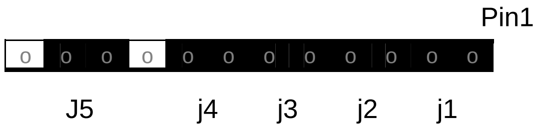
Functional Diagram



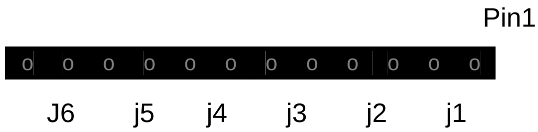


Jumpers

The Jumpers J1 – J6 are used on the 820957 only and must be setup depending on the actual Motherboard (KT690 or KT780). The Jumpers are mounted on a 12-pin single in line connector as indicated below.



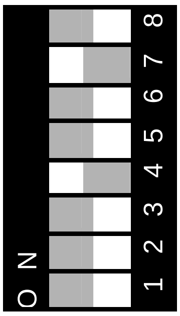
KT690 setting
(J6 not used, J5 on pin 10 - 11)



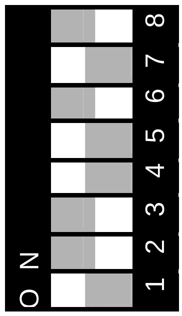
KT780 setting
(Default, all jumper installed)

Dip Switches

The DIP Switchx8 is used on the 820957 only and must be setup depending on the actual Motherboard (KT690 or KT780). The switches are set as indicated below.



KT690 setting
(048h)



KT780 setting
(059h)

Connectors

HDMI connector (available on 820957)

The HDMI connector is of type Samtec HDMI-19-01-S-SM or similar.

Pin No.	Signal	Type	Pull Up
1	TMDS Data 2+	LVDS OUT	
2	GND	PWR	
3	TMDS Data 2-	LVDS OUT	
4	TMDS Data 1+	LVDS OUT	
5	GND	PWR	
6	TMDS Data 1-	LVDS OUT	
7	TMDS Data 0+	LVDS OUT	
8	GND	PWR	
9	TMDS Data 0-	LVDS OUT	
10	TMDS Clock+	LVDS OUT	
11	GND	PWR	
12	TMDS Clock-	LVDS OUT	
13	CEC	NC	
14	NC	NC	
15	DDC Clock	IO	2K2
16	DDC Data	IO	2K2
17	GND	PWR	
18	+5V (55mA)	PWR	
19	Hot Plug Detect	I	
20-23	GND	PWR	

DVI-SIL2/DVI-SIL1 (available on 820957/820959 respectively)

The “DVI” connector is a Hirose DF19G-20P-1H. Mating connector is Hirose DF19L-20P-1H or similar. (In order to implement real DVI connector the cable kit 821524 must be used).

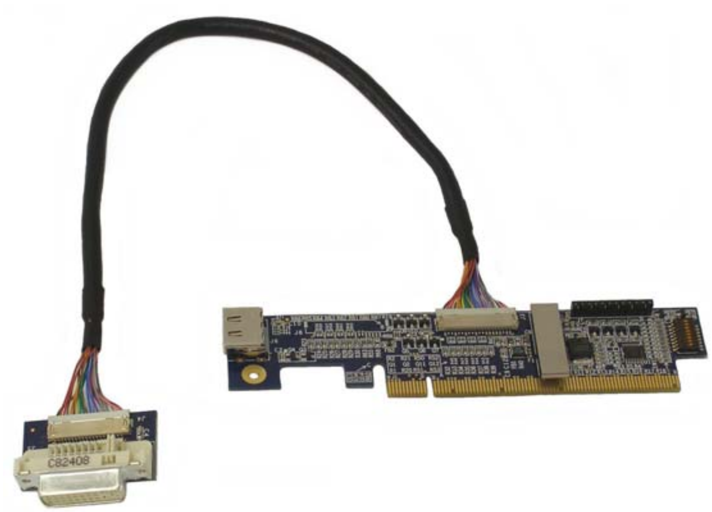
Pin No.	Signal	Type	Pull Up
1	GND	PWR	
2	GND	PWR	
3	+5V (55mA)	PWR	
4	Hot Plug Detect	I	
5	GND	PWR	
6	DDC Data	IO	2K2
7	DDC Clock	IO	2K2
8	GND	PWR	
9	TMDS Clock-	LVDS OUT	
10	TMDS Clock+	LVDS OUT	
11	GND	PWR	
12	TMDS Data 0-	LVDS OUT	
13	TMDS Data 0+	LVDS OUT	
14	GND	PWR	
15	TMDS Data 1-	LVDS OUT	
16	TMDS Data 1+	LVDS OUT	
17	GND	PWR	
18	TMDS Data 2-	LVDS OUT	
19	TMDS Data 2+	LVDS OUT	
20	GND	PWR	
Shield	GND	PWR	

Cable kit descriptions

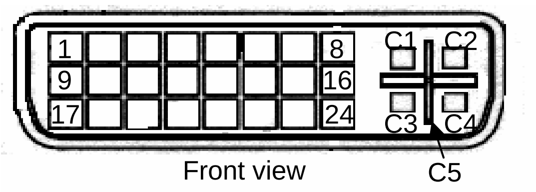
DVI Converter PCB is attached as a brake off module to the KT-PCIe module.

The converter contains two connectors to convert from DVI-SIL (Hirose DF19L-20P-1H) to DVI-I.

The KT-PCIe-modules includes DVI cable 300mm long (PN. 821524) in order to convert the SIL-DVI1/SIL-DVI2 connector to a DVI-I connector.



The cable wiring is a one-to-one connection.



The **DVI-I** connector is a Molex 74320-1004 (or similar).
Only DVI Digital output is supported.
(Both DVI-I and DVI-D cables can be connected).

DVI-SIL Pin No.	DVI-I Pin No.	Signal
1	-	GND
2	-	GND
3	14	+5V (55mA)
4	16	Hot Plug Detect
5	15	GND
6	7	DDC Data
7	6	DDC Clock
8	-	GND
9	24	TMDS Clock-
10	23	TMDS Clock+
11	22	GND
12	17	TMDS Data 0-
13	18	TMDS Data 0+
14	19	GND
15	9	TMDS Data 1-
16	10	TMDS Data 1+
17	11	GND
18	1	TMDS Data 2-
19	2	TMDS Data 2+
20	3	GND

Installation Guide

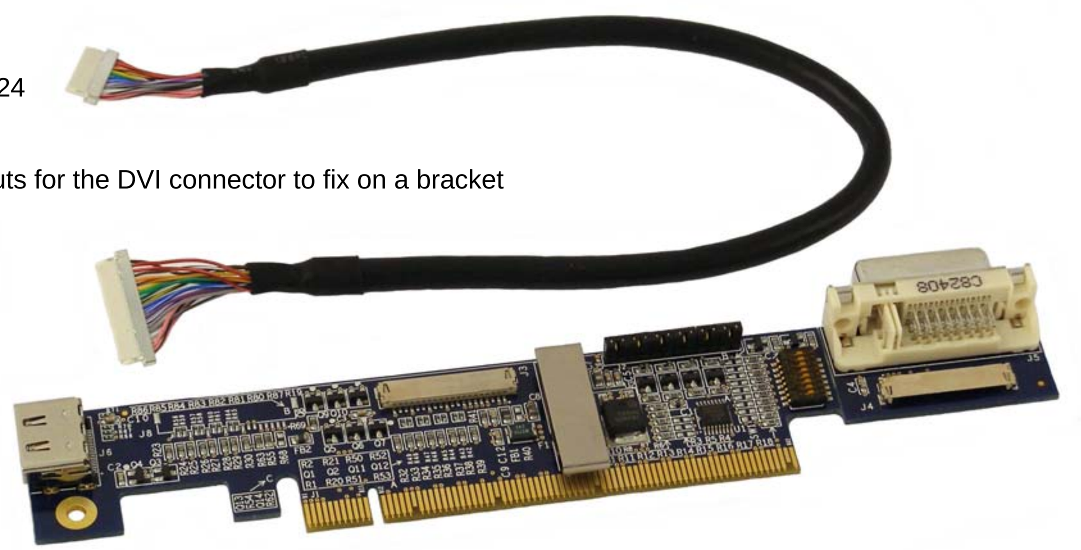
These KT-PCIe cards fits into a standard PCIe connector like the Molex 877159308 PCIe edge connector which has no integrated PCIe card lock.

The 820957 and 820959 kits contain:

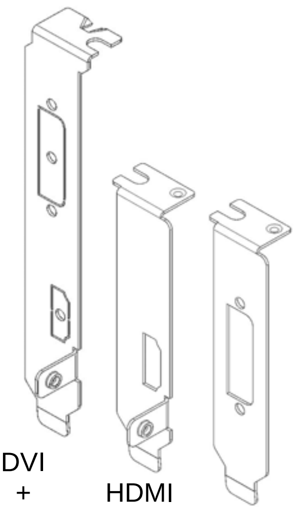
1. Cable 821524

2. Two Hex Nuts for the DVI connector to fix on a bracket

3. The module



4. Low Profile Brackets for HDMI (only 820957)
5. Low Profile Brackets for DVI
6. Full Height ATX Bracket for HDMI (only 820957)
7. Screw for fixing bracket to module (only 820957)



Brake of the DVI Connector adapter.



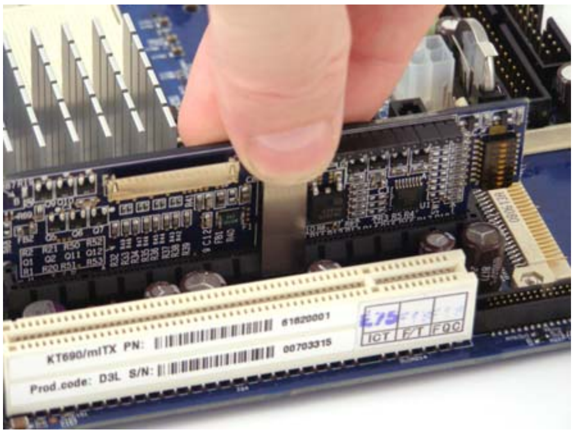
If DVI shall be used then used the cable kit to interface the module and the DVI Connector adapter.
If DVI Bracket shall be used then fix the DVI connector to the bracket via the two Hex Nuts.
IF required and if HDMI Bracket then fix HDMI Bracket to the module by screw.

Insert the module to the Motherboard (KT690 or KT780 only) via the PCIex16 slot nearest the CPU.

No special settings required in BIOS and OS drivers includes support for the modules.

Boot into OS and use the Catalyst Control Center to select requested display configuration.

The Lock-Clip is use to fix the module into the PCIex16 slot. In order to release the Lock-Clip press by your thumb on the top part of the Lock-clip as indicated on the picture below.



Other specifications

Power consumption:

The +5V available on both the HDMI and DVI can deliver minimum 55mA continuously and 1A peak. The output is protected by thermal shutdown circuit.

3.3V 0.3W max.
12V 1.2W max.

Operating temperature: 0-60ºC